Automating Your Library

Hints, Helps, and How To's

By
Sandi Long

Utah's Public Library Information Forum and Training

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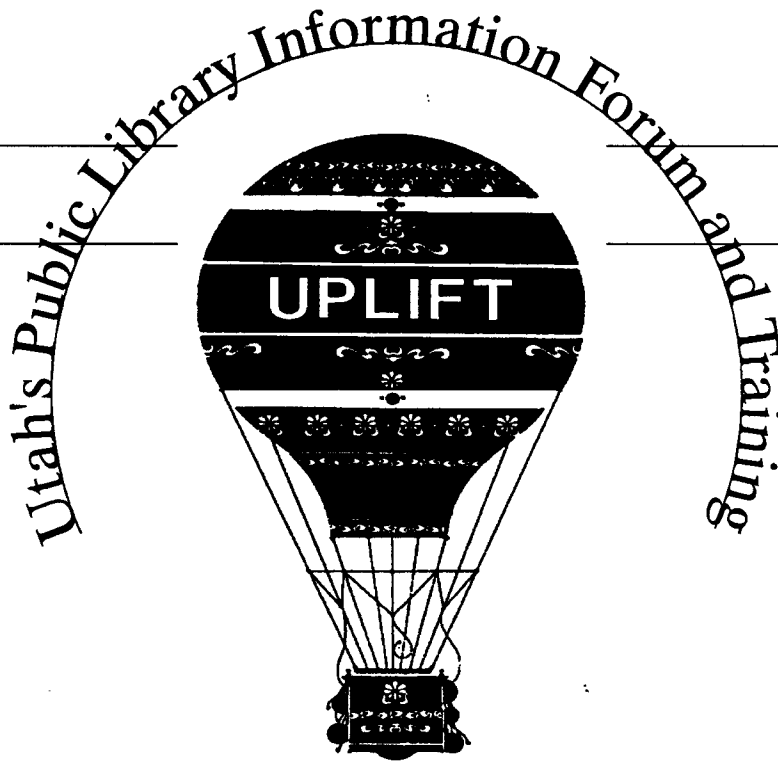
Information Forum Publication
#1

AUTOMATING YOUR LIBRARY

Hints, Helps, and How To's

Plus

Guidelines for L.S.C.A. Funding

By
Sandi Long

November, 1992

ACKNOWLEDGEMENTS

Many sources were perused prior to the writing of this document. Several of them are listed in the bibliography.

However, the Utah State Library Division would especially like to acknowledge the help of their sister agencies in other states in this endeavor. Almost all of the state library agencies contacted responded to our request for information on automation purchasing guidelines and/or automation guidelines for L.S.C.A. projects in their states. Even those states without such guidelines acknowledged the request for information and expressed interest in the outcome.

Although some of the documents received did not approach the problem in the same manner that Utah does in this document, we appreciate the time and effort spent in providing us that the information.

We would especially like to acknowledge the following states, which we relied on heavily for ideas and approaches to the subject: Arkansas, Florida, Illinois, Minnesota, New Jersey, New Mexico, New York, Pennsylvania, Texas, and Wisconsin.

INTRODUCTION

These Guidelines were adopted by the L.S.C.A. Advisory Council on May 7, 1992 and by the Utah State Library Board on August 18, 1992.

The purpose of this document is twofold. The first purpose is to establish general guidelines and references for a library to use when looking at a major automation project. The second purpose is to establish some criteria for projects which will be considered eligible for funding through the federal Library Services and Construction Act (L.S.C.A.) competitive grants.

When library automation is discussed, people usually think of circulation systems and on-line catalogs. For the purposes of these guidelines and for L.S.C.A competitive grants, the definition is broader than that.

In a large sense, automation is any task which is done by machine (with or without human input) as opposed to a manual manipulation of items or data by a human.

However, for our purposes, automation is defined as the use of a computerized application as a data and information storage and/or access tool. This may range from an actual computer (micro to mainframe), to devices to be attached to a computer (printer, modem, CD-ROM, etc.), to other stand-alone computerized devices (such as fax machines), and/or the software needed to run the application. Database development for a circulation system and/or on-line catalog is also a legitimate automation project for L.S.C.A. funding.

The Guidelines are divided into four sections. The first briefly looks at reasons to, or not to, automate (page 2).

Next is a section on planning for automation (page 3). The planning strategy described in this section focuses on planning for the installation or enhancement of a circulation system or on-line catalog. However, the principles outlined could be applied at a lesser level of effort for adding equipment to an existing system or acquiring CD-ROMs, on-line database services or other technologies. The planning strategy is built on the concept that the main reason for library automation of any variety is to insure that citizens have access to information. Local automation projects should, first and foremost, be aimed at helping people obtain faster, better, and more convenient information and library service.

The third section describes what is required by the Utah State Library Division for an automation project to be eligible for an L.S.C.A. grant. It is broken down into requirements for library management systems (circulation, online catalogs, etc.) (page 7), requirements for information and networking applications (FAX machines, modems, CD-ROM databases, etc.) (page 9), and what cannot be funded (page 10).

The last section is a short bibliography of books, periodicals and vertical file materials (page 11) which can help a librarian in automating the library.

WHY AUTOMATE?
SHOULD WE OR SHOULDN'T WE?

Before you spend time and money on automating your library, you need to answer the question "Why automate?" In other words, "What results and benefits do we expect to gain through automating?" "How will it benefit our clientele?"

REMEMBER
Automation won't solve personnel or other organization problems.
Automation won't save you lots of money or allow you to significantly cut staff.
Automation is expensive.
Automation is not for everybody.

Again, why automate? How can it improve your service to your patrons? Any automation project should stress the answer to that question. It should not hinge on how the library will be run more efficiently or how you will have better control over library functions and assets, but on how you will better serve your public.

What are some advantages to automating?

  ✓   It can improve services to patrons.
  ✓   It can improve the library's image.
  ✓   It can improve internal operations.
  ✓   Time that is currently spent on repetitive and laborious work can be better spent on providing more direct assistance to the library's patrons.
  ✓   It will insure the confidentiality of patron records.
  ✓   It will enable you to collect more accurate statistics.
  ✓   An online catalog can provide significantly better access to the library's collection.
  ✓   It can provide access to new information sources not available before.

What are some of the disadvantages?

  ✓   An automation project can be initially disruptive.
  ✓   It requires careful planning.
  ✓   It will probably take more time than anticipated.
  ✓   It involves a major staff commitment.
  ✓   It is more complex than is often assumed.
  ✓   Costs are usually higher than anticipated.
  ✓   It may involve new on-going costs.
  ✓   It also disrupts service, after installation, when it goes down.

How do you know when to automate, whether to automate? You do your homework. You plan. And you investigate. The next section gives some suggestions on ways to proceed.

Automation Guidelines - 2

PLANNING PROCESS
FOR LIBRARY MANAGEMENT SYSTEMS

It is important to realize that there is a critical difference between implementing an automated system that *technically* works in your library and installing an automated system that is *acceptable* in your library. The system may do the tasks required of it, but, if the user's perception is that it is *not* quick and easy, the system is a failure.

Common problems in the automation process

☞ Lack of thorough planning
☞ Failure to understand and perceive the human factor
☞ Lack of staff expertise in technical issues, understanding the marketplace, working with vendors.
☞ Lack of time, or underestimation of the time it takes to implement the system.
☞ Lack of sufficient commitment by staff and/or board.
☞ Lack of adequate funding.
☞ Inadequate staff training.

General steps in the process of automation: **Don't** run out and buy a computer, or other hardware, first, and then figure out what to do with it later. The purchase of a piece of hardware is the **last** step in the process. This may seem backwards, but read on.

Step 1: Plan for now and five years down the road. Decide what functions you want the system to perform: Is the system going to be dedicated to a single function (such as cataloging, circulation, OCLC, etc.), or to multiple functions? Do you want to be able to communicate with other systems for database searching, etc.? What peripherals do you want attached? Is the computer to be part of a local area network (LAN)?

Step 2: Explore the possible pieces of software that will accomplish the functions (tasks) you have identified for the system.

Step 3: After you have settled on the functions to be automated and what software you will use, now is the time to begin developing specifications and shopping for the hardware. Design the specifications so that the hardware will have the capability to run the software you have chosen, allowing for expansion and upgrades to the software.

One final note: At every step along the way, do your homework and ask loads of questions. If you don't understand something, ASK!! Document your questions and the answers for future reference. If you need help, call fellow librarians or others who have experience in automation functions. Learn from their experience and their mistakes. Ask the vendor for a list of libraries using their product. If possible, visit libraries who are using the product.

The same strategy applies to other automation projects. For example, if you are looking at a CD-ROM database, first determine what databases you need, then look for the equipment which will run that product.

Listed below are some of the important factors to consider when planning and implementing an automated system. Although the steps are presented in a basic chronological order, the exact sequence will vary depending on local circumstances and what automated system is ultimately selected. Also, all of the steps listed are relevant to a circulation system or online catalog project, but only some may be necessary for a fax project, and none may be relevant to a CD-ROM project. You should review them and adapt them to your project.

1. With the staff, conduct a basic review of the areas and functions under consideration, to determine the extent of current problems. Review changes that automation will make. Will that solve the problems, or are those problems of a different nature?

2. Inform and educate your governing body on the problems associated with your current operation. Outline the benefits of automation and get their support to start planning for an automated system. Keep them and all library staff closely informed throughout the process.

3. If possible, establish an automation committee, including staff who are directly involved with the functions being automated, especially any staff member with a disability who needs to be accommodated.

4. If the new automated service will be used by the public, determine how you will make that service available to patrons with various disabilities.

5. Develop a description of your library for the vendors:

    For example, for an online catalog/circulation system the following would be important.

    ⇨ Physical layout (including electrical supply),
    ⇨ Number of patrons,
    ⇨ Number of patron types,
    ⇨ Number of unique titles and items,
    ⇨ Number of collection types (Ref., Juv., YA, E, Video, etc.),
    ⇨ Loan periods, fines, renewal policies,
    ⇨ Reserve policies, circulation restrictions,
    ⇨ Annual circulation (also maximum circulation for one hour and one day),
    ⇨ How many circulation and/or public access stations you have or will need,
    ⇨ What kinds of statistics do you want and/or need.
    ⇨ Projected five-year growth of the above figures.

6. Draft a list of essential and desired features and incorporate them into a system evaluation checklist.

   ✓ Distinguish between features that are essential, desirable, and highly desirable.

   ✓ Keep essential features to a minimum - be realistic; do not submit a wish list; be concise and clear; and allow space for vendors to add comments.

   ✓ Review Americans with Disabilities Act guidelines to determine what, if any, accommodations must be made.

   ✓ Provide space on your Checklist for the vendor to check if their system has the features listed.

   ✓ Do not send vendors a "cooked" Checklist - a list designed to eliminate all but one vendor's system.

   ✓ Focus on what the automated system should do rather than how it should do it.

   ✓ The training component is crucial to the success of any project. Ask vendors about their training packages, including ongoing training, technical support and "help" lines.

   ✓ Ask about site preparation - power requirements, air conditioning, "clean room", etc.

   ✓ If dealing with a software vendor, ask what hardware configuration is necessary, what is recommended, and if a growth factor has been figured in.

   ✓ Identify costs (all costs - purchase, shipping, installation, personnel training, documentation and training manuals, maintenance support, etc.). Don't forget supplies (bar code labels, tapes for backup, diskettes, printer supplies, etc.).

7. Review your physical facility and determine where the microcomputers, or other equipment, will be placed and if any site modifications are needed, based on vendor information.

8. Visit other libraries to test their systems as well as see how they have designed the work space around the equipment. Ask the staff who use the system questions about the system, problems, suggestions, what they would do differently.

9. Investigate methods of database conversion of holdings which can be used with your chosen system (OCLC records, Bibliofile or other CD-ROM databases, staff input, etc.). Estimate time and cost for each. Include all staff time as a cost factor. Will it require temporary help to complete? If a circulation system is being considered, the cost of patron file conversion should also be included.

10.   Investigate the pros and cons of buying the hardware and software from the same vendor. There is no one answer on this. It all depends on the local situation. For example, if you buy hardware and software from the same vendor, you only have to call one place for any problem. The disadvantage to buying from one source is that you may be able to purchase hardware less expensively locally or get faster service. Again, the experience of other libraries can be very helpful here.

11.   Present your governing body with cost figures and get their approval to continue.

12.   Contact the vendor(s) you have selected and resolve any outstanding issues and questions. Put into writing any agreements or understandings that are made.

13.   Develop public relations information to alert patrons concerning the new automated system. Plan for a transition time. Will the library be open or closed during installation? Keep your public informed!

14.   Prepare the physical site for installation.

15.   Install equipment and/or software.

16.   Train staff. The training component is crucial to the success of any project. Vendors (or vendor-recommended third parties) should train just the trainers, not the entire staff. It is therefore very important for the library to select the correct people for the vendor to train. Those trained by the vendor should be, first and foremost, staff members who are chosen for their ability to train others and their enthusiasm for learning and sharing new skills, not just because they fill a particular position on the organization chart.

        Training is important, and provision must be made for it during staff scheduling. Staff must not feel that they are ignoring their "important" work while training or practicing, and they must not feel that they are placing an unfair burden on the staff not currently being trained.

        Provision also needs to be made for ongoing training, both refresher courses for current staff and training for new staff.

REQUIREMENTS FOR AN L.S.C.A. GRANT APPLICATION

LIBRARY MANAGEMENT SYSTEMS

What prior work should be completed before a library submits an application for an L.S.C.A. automation grant for a library management system (circulation system, online catalog, periodical management, AV booking system, etc.)?

1.   A three to five year plan for automation for your library should be written and submitted with the L.S.C.A. application. (Note: this plan may have been written a few years back, and this project is one part of an ongoing plan.) The plan need not be elaborate, but should reflect the library's strategic decisions about what automation is needed and why.

2.   If the current project is a module in a larger project (Ex: A circulation system which will eventually tie into an online catalog), the librarian should document that the software can be integrated into the entire system or that the records are transferrable.

3.   If library patrons will be using the system, document what accommodations are being made for people with disabilities (voice activated terminals, braille printers, worktables at proper height for wheel chairs, staff to assist, etc.)

4.   If the current project is part of an interlibrary cooperative project, a library networking proposal, or will have impact beyond the applying library, the grant application should explain the circumstances.

5.   Submit a copy of the library's system evaluation checklist or other documentation showing the reason why the particular vendor or software was chosen. In other words, you must have evaluated your needs, evaluated what is available to meet your needs, and made your choice of hardware/software before applying for a grant.

6.   If implementation of the automation requires data entry (circulation system, on-line catalog, etc.) indicate the manner of data entry (OCLC tapes, CD-ROM database, direct keying, etc.), cost and time factor, even if that is not covered in the grant. Will this be done by regular staff, temporary employees, or volunteers?

7.   Evidence of local commitment to the project is vital. Show, in terms of dollars, what the local library is contributing to the new system. This should include staff time for implementation. It should also include evidence of continuing support in the future.

8.   In general, requests for larger grants should submit more documentation than requests for smaller amounts.

9.   Document that the project will meet the following standards, where applicable.

Standards for Bibliographic Records:

The format for inputting and outputting records shall be *USMARC Format for Bibliographic Data*.

The minimum level for original descriptive cataloging and access points shall be AACR2, Level I, plus series statement.

Subject headings shall be assigned from any controlled vocabulary subject heading system/thesaurus provided for in *USMARC Format for Bibliographic Data*.

All machine readable records should conform to the USMARC standard.

All records should contain one or more of the following numeric identifiers, if available: LCCN, ISBN, ISSN, OCLC record number, Standard Technical Report Number, and/or Government Printing Office stock number.

Standards for Online Catalogs:

Meet the bibliographic record standards above.

The catalog shall be searchable, at least, by personal and corporate authors, titles, series, and subjects.

It is highly recommended that "see" and "see also" references be included in the catalog.

It is also highly recommended that key word searching be a feature of any online catalog.

Standards for Circulation Systems:

Meet the bibliographic record standards above.

The system should have adequate security for patron and circulation files, as is provided in Utah's *Government Records Access Management Act* (GRAMA).

The circulation system should show location and availability, or circulation status, of individual items in the collection. Location can refer to a particular library in a multi-library system or to special circumstances requiring an item to be in a different location (temporary reserve shelf, bindery, repair, etc.)

INFORMATION OR NETWORKING APPLICATIONS

What prior work should be completed before a library submits an application for an L.S.C.A. automation grant for information or networking applications (CD-ROM databases, fax machines, modems, etc.)?

1.   For an information application (CD-ROM, etc.): Explain how the purchase fits in with your collection development policy; why the particular application was selected; and how it complements (rather than duplicates) other resources available in the community (school libraries, university libraries, etc.)

2.   For a networking application (Fax, modem, etc.): Explain how the networking device will be used. If the device will link the library to an interlibrary cooperative, library network, or consortium, the library should be a member in good standing of that organization.

3.   For both applications: Explain how the application will be supported in the future (supplies, phone lines, maintenance/upgrades to hardware, software, and databases, etc.)

4.   For both applications: Explain how the project will benefit your patrons.

5.   If library patrons will be using any part of the information or network application, document what accommodations are being made for patrons with disabilities.

Standards for Telecommunications:

For networking applications: Modems attached to computers must be auto-dial, auto-answer, and be capable of data transmission speeds of 9600 bps.

For stand alone applications: Modems should support at least 2400 bps.

Any modem should also have the capability of automatically matching its speed to the quality of the transmission line and capability of the receiving equipment.

Modems and telefacsimile machines should be attached to a dedicated telephone line.

Telefacsimile machines must be used for resource sharing through interlibrary loan. Such use requires a willingness to participate fully as a lender as well as a borrower.

At a minimum, fax equipment must meet CCIT Group 3 standards, as well as the modem standards, above.

The equipment should be capable of standard image resolution of 203x98 and fine resolution of 203x196, and use plain paper.

WHAT PROJECTS CANNOT BE FUNDED?

What areas cannot be covered by an L.S.C.A. "Automation" grant?

> The cost of installing and/or maintaining a telecommunications line for computer access or telefacsimile transmission. However, a modem can be purchased with a grant.

> Administrative costs for ordering, installing and/or maintaining the system.

> Supplies and/or system maintenance.

> Locally developed systems.

> Staff training.

> Personnel (except that which is needed specifically to create the database and implement a circulation system or online catalog).

> Applications which include machines purchased for audio-visual (AV) purposes. Therefore, a CD player which is to be used with a database to be searched for information purposes can be included in an automation project, whereas a CD player purchased for the purpose of playing music cannot. (That is, it cannot be funded under the "Automation" provision. AV grants may be awarded in other areas of L.S.C.A.)

BIBLIOGRAPHY

The citations which follow may be helpful to a librarian and board in deciding whether to automate their library and in the planning process which should ensue. Some of the items are quite detailed and mainly relate to large integrated systems. However, even those sources have good suggestions which should be considered before automating, no matter what the size or scope of the project. These items are available through interlibrary loan.

CITATIONS

Automating Your Library in New Jersey: A Planning Blue Book. New Jersey State Library. September, 1990.

Bocher, Robert. *The "Small" Library and Automated Systems.* Wisconsin Division for Library Services. 1991.

Byrne, Deborah. *MARC Manual: Understanding and Using MARC Records.* Libraries Unlimited. 1990.

Costa, Betty and Costa, Marie. *A Micro Handbook for Small Libraries and Media Centers*, 2nd ed. Libraries Unlimited. 1986.

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Garcia, C. Rebecca and Bridge, Frank R. *Data Conversion: A Fundamental Step Toward Library Automation.* Participant Workbook. Library Development Division, Texas State Library. November 1988.

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Request for Proposal for Library Automation Software. Hawaii State Public Library System. nd.

Saffady, William. *Introduction to Automation for Libraries*, 2nd edition. American Library Association. 1989.

Sample RFI (Request for Information). Library Development Division, Texas State Library. nd.

USMARC Format for Bibliographic Data, Appendix A.

Walton, Robert A. *Preparing Contracts and Negotiating with Library Automation Vendors.* Library Development Division, Texas State Library. January, 1989.

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PERIODICALS

The following is a list of periodicals which frequently have helpful articles. The articles will range from helpful hints in automating a library to actual reviews of hardware and software.

Library related periodicals:

Electronic Library
Library Hi Tech
Library Journal
Library Software Review
Library Technology Reports
Public Library Quarterly
School Library Journal
School Library Media Quarterly
Small Computers in Libraries
Wilson Library Bulletin

Computer related periodicals (includes hardware, general software, peripherals, such as CD-ROM players, printers, fax machines, modems). This is a very short list of the more popular titles.

Byte
CD-ROM Review
Computer Buyer's Guide & Handbook
Computerworld
InfoWorld
LAN Times
PC Computing
PC Review
PC Week
Small Business Computer News

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Other Publications in the Information Forum Series

.

The Upgrade Process: Planning, Evaluating, and Measuring for Excellence in Public Library Service.

An Organizational Analysis of Multi-type Library Cooperation in Utah, A Consideration of Basic Issues For Laypersons and Librarians.

Community Needs Assessment for Public Library Services, A Working Paper of the Utah Public Library Institute for Training.

Coping with the World: Helping Children Deal with New or Difficult Situations Through Picture Books, UPLIFT Publication No. 2.

Related Publications

Directory of Academic Libraries in Utah
Directory of Public Libraries in Utah
Directions for Utah Libraries (newsletter)
LSCA Handbook
Utah Public Library Service (Annual Report)   .